

CLAIMS

1. A method operative in a system in which a set of distributed servers accept file submissions, comprising:

5 in response to receipt of a file submission at a given server, accepting the file submission at the given server only if a given subset of the set of distributed servers agree to the file submission; and

10 upon acceptance of the file submission, staging the file for subsequent transport.

2. The method as described in Claim 1 wherein the accepting step comprises:

15 executing a data exchange protocol among the given subset until a given state is reached.

3. The method as described in Claim 2 wherein the data exchange protocol is a vector exchange.

20 4. The method as described in Claim 3 wherein the vector exchange passes a data string from a first server to a second server where, upon receipt of the data string at the second server, the second server modifies the data string to indicate its receipt of the data string.

25 5. The method as described in Claim 3 wherein the accepting step includes having the given server determine its connectivity to the set of distributed servers prior to initiating the data exchange protocol.

30 6. The method as described in Claim 5 wherein the accepting step includes having the given server deliver the

file to those servers in the set of distributed servers to which the given server has connectivity.

5 7. The method as described in Claim 1 wherein the given subset of the set of servers is a quorum.

 8. The method as described in Claim 7 wherein the quorum is a majority.

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9. A method operative in a system comprising a set of distributed servers, wherein each server has the capability of accepting a file submission, comprising:

in response to receipt at a given server of a request
5 to submit a file, having the given server determine its connectivity to other servers of the set;

encoding given information about the file into a temporary identifier;

having the given server output the file and its
10 associated temporary identifier to each of the other servers to which the given server has connectivity;

if the file has been successfully pushed, having the given server initiate a data exchange protocol to each of the other servers to which the given server has
15 connectivity;

based on the data exchange protocol, determining whether a quorum of the servers have reached a given state;

when the quorum of servers reach the given state, accepting the file for submission.

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10. The method as described in Claim 9 wherein the temporary identifier comprises given information, the given information selected from a set of information that includes a filename, a timestamp, an identifier for the
25 server at which the request is received, and a random string.

11. The method as described in Claim 10 wherein the data exchange protocol passes a knowledge vector.

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12. The method as described in Claim 11 wherein the data exchange protocol includes the steps of:

having a server that receives the knowledge vector
make a determination whether the knowledge vector
identifies the server as having knowledge of the file; and

if the server has knowledge of the file, having the
5 server modify the knowledge vector to reflect this
knowledge;

having the server output the knowledge vector to the
servers to which it has connectivity.

10 13. The method as described in Claim 9 wherein the
quorum is a majority.

14. The method as described in Claim 9 wherein the
quorum is a given subset of the set of servers.

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15. The method as described in Claim 9 further
including the steps of, at each server of the quorum and
after the file is accepted:

removing the temporary identifier; and

20 storing the file persistently in a local file system.

16. The method as described in Claim 15 further
including the step of staging the file for subsequent
delivery.

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17. The method as described in Claim 9 further
including the step of having the given server issue a reply
to a requesting client that the file submission was
successful.

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